Rho700/800

7. Workstation

HP xw8400 Xeon 5130 Dualcore

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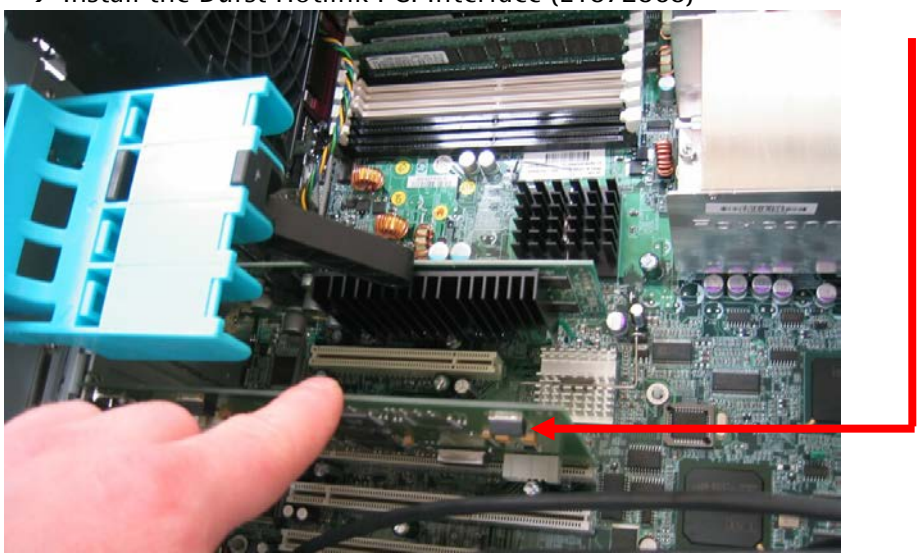
1. Hardware configuration

Attention: For this step you must work on an ESD-working place!!!

1.1 Open the PC and check the following configuration:
PCI slots from top to bottom:

Slot 1 – PCI	(free)
Slot 2 – PCI Express x16	(Graphic PCB)
Slot 3 – PCI x8 (x 4)	(free)
Slot 4 – PCI Express x 16 prime (x 8)	(free)
Slot 5 – PCI-X 133	Durst Hotlink PCI Interface (E1872868)
Slot 6 – PCI-X 100	(free)
Slot 7 – PCI-X 100	(free)

→ Install the Durst Hotlink PCI Interface (E1872868)



2. Bios Setup

2.1 Enter BIOS Setup

- Turn on the workstation and press "F10"
- Select "English" as language

2.2 Check the installed Hardware:

→ File/System Information

-Hewlett-Packard hp workstation xw8400
-Intel(R) Xeon(TM) CPU 5130 2GHz
-Memory 2048 MB DDR2/667 MHz Dual Channel

2.3 Time/Date

→ File /Set Time and Date
Adjust the "Time and Date"- and press "F10"

2.4 Boot Order: (same order as below)

-Optical Drive
-Diskette Drive
-USB-device
-Hard drive
-Broadcom Ethernet Controller

To select use the arrows up / down!
For accept please press "F10"!

2.5 Options

→ Advanced/Power on Options

POST Messages	→ Enable
F9 Prompt	→ Displayed
F10 Prompt	→ Displayed
F12 Prompt	→ Displayed
F1 Prompt on recoverable errors	→ Enable
Option ROM Prompt	→ Enable
Remote wakeup boot source	→ local hard drive
After power loss	→ off
Post delay (in seconds)	→ none
Setup browser mode	→ Enable

2.6 Exit BIOS Setup

-Insert the first CD of the RED Hat Linux installation

→ File/Save Changes & Exit
Press "F10" to reboot

3.RED Hat Enterprise Linux WS4 U4 x86 EM64T Installation

For the Linux installation you must use the Durst Rho600 Linux RedHatEnterprise V4U4 CD 1 to5!!!

3.1 Start installation

After restart, the Workstation is booting from the Setup CD
(If you know that you are using an working CD you can skip the CD Test)

- Press "Next" at the Welcome Screen
- Select "English" as language and press "Next"
- Select "U.S. International" as Keyboard setting and press "Next"
- Select "Install RED Hat Enterprises Linux ws" and press "Next"

3.2 Disk Partitioning

- Select "Manually Partition with Disk Druid" and press "*Next*"
- Delete all Partitions until under sda and sdb you can only read „Free Space"

Create New Partitions:

To create a new Partition you have to click on "New" and do the following adjustments and afterwards press "OK":

Sda HDD:

1. Mount Point = "/boot"
   select "only sda"
   Size (MB) = 100

2. Mount Point = "/"
   select "only sda"
   Size (MB) = 54000

3. File System Type = "swap"
   select "only sda"
   Size (MB) = 6000

4. Mount Point = "/home"
   select "only sda"
   Size (MB) = select "Fill to maximum allowable size"

Sdb HDD:

1. Mount Point = "/mnt/images"
   select "only sdb"
   Size (MB) = select "Fill to maximum allowable size"

To finish Partitioning click on "Next" and at the Boot Loader Configuration also "Next"

3.3 **Other Configurations:**

- Network Configuration press *"Next"*
- Select "No Firewall" and set Enable SELinux to Disabled, press *"Next"*
- Warning – No Firewall press *"Proceed"*
- Additional Language Support press *"Next"*
- Time Zone Selection: Europe/Vienna press *"Next"*
- Set Root Password
  Root Password: Digilarger
  Confirm: Digilarger
  "Next"
- Package Defaults; select "*Customize the set of packages to be installed*" and press *"Next"*
- Package Group Section, select "*Miscellaneous/ Everything*" and press *"Next"*
- *About to Install* press *"Next"*
-Required Install Media press *"Continue"*

3.4 **Copying:**

Now the System copies the data from the CD to the HDD, you have to change the CD and press "OK" if the information message occurs on the Monitor. (After CD5 it is necessary to put in CD1 again)

3.5 **System adjustment:**

After copying the workstation will reboot, go on like below:

- "Next" at Welcome Screen
- License agreement, select "Yes, I agree the ..." and press "Next"
- Set Date and Time and go on with *"Next"*
- Display Settings:

Configure	→ select "Hewlett-Packard" -> "HP L1940 Flat Panel Monitor"
Resolution	→1280x1024 Pixel
Color Depth	→ millions of colors
"Next"	

- Set System User:

Username:	→ durst
Full Name:	→ Rho600 Operator
Password:	→ Digilarger
Confirm Password:	→ Digilarger
"Next"	

- Sound Card select "Play test Sound" if you can hear the Sound press "Next"

- Additional CDs

-Insert RHEL 4U4 Extras CD and press "Install"
→ Forward
Select: -Java, -Multimedia, -Misc
→ Forward
→ Forward
→ Finish

-Insert HP Driver CD and press "Install"
→ Begin install
→ Reboot later
→ Next
→ Finish

After installing both additional CDs press "Next" and Reboot the System.

3.6 **Desktop adjustment**

Login as: User: root
PW. Digilarger

- rightclick on the lower Panel and Select "Delete this Panel"
- pull down the upper Panel to the position of the lower ones.
- rightclick on the Panel and Select "Add to Panel →Workspace Switcher →Add"
- rightclick on the Panel and Select "Add to Panel →Windows List"
- rightclick on the Panel and Select "Properties", set Panel Size to 30pixel and activate "Autohide"
- remove the "!" Symbol in the lower bottom corner
- click on *Computer* → *Edit* → *Preferences* → *Behavior* and activate "Always open in browser window"
- Logout and mark the line "save current setup"

→ Login as: User: Durst
Password: Digilarger

→ Repeat the desktop adjustment as with the root-login.

→ Change back to user *root*.

4. Installation Rho Software

Put the Durst-Rho XX SW in the CD-drive.

Do you wish to run /mnt/cdrom/autorun? Yes)

```
**********************************************************
********                                         *******
********        Durst Software Installation      *******
*******                                          *******
**********************************************************
Do you want to continue ( y[es],n[o] ) :
y

Specify Installation Directory as
Subdirectory of /usr/local

Default is [printsw]:

Do you want to use the default
install directory ( y[es],n[o] ):
y

Used Installation Directory is: /usr/local/printsw/

Do you want to continue ( y[es],n[o] ) :
y
```

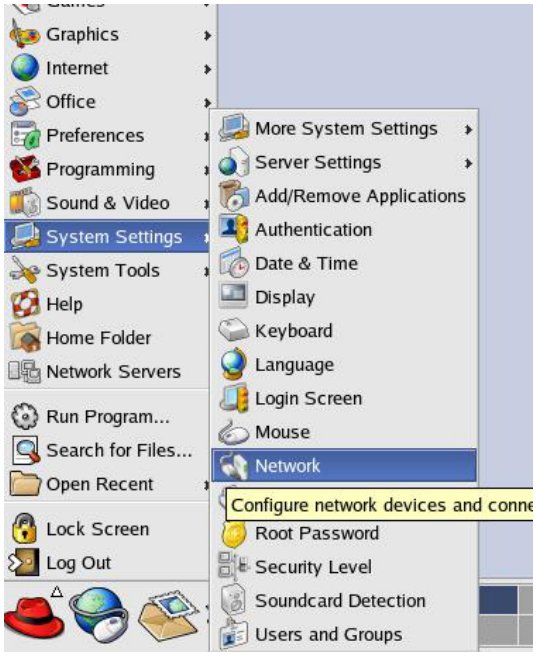
Step 1: Install Interface Driver (not by the PrepStation)

```
 (Actual Directory: /media/cdrecorder)

     2) Install Interface Device Driver
     3) Install/Update Durst Printer Software
     5) Take over DurstPrinter.setup from old software
     6) Exit Installation Program

Please select option:

2

     1) Install DHL-Device (Product LAMBDA/RHO/THETA)
     2) Exit

Please select option:
1

Operating System Version: Kernel 2.6.9-42.EL
DHL Driver RPM Kit      : dhl-1.02.30-1.x86_64.rpm
************************************************
optolink/dhlinstall: line 54: [: !=: unary operator expected

******************************************************
*                                                    *
* Installing driver dhl-1.02.30-1 for DHL            *
*                                                    *
******************************************************

Continue( y[es],n[o] ):y

Installing:
Loading dhl

Check installation
Installed: dhl-1.00.03-3

Check loaded modules
dhl                    21360   0  (unused)

Enter any key to continue:

     1) Install DHL-Device (Product LAMBDA/RHO/THETA)
     2) Exit

Please select option:
2
```

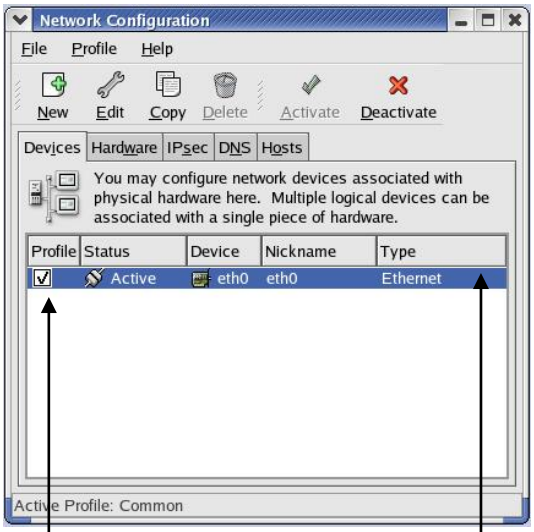
Step 2: Install/Update Durst Printer Software

```
(Actual Directory: /mnt/cdrecorder)

     2) Install Interface Device Driver
     3) Install/Update Durst Printer Software
     5) Take over DurstPrinter.setup from old software
     6) Exit Installation Program

Please select option:

3


User is: root

************************************************
 Installing Durst Printer Software 1.0Rev.02

 The procedure installs or updates the Durst Printer
 Software to version PRINTER SW 1.0 Rev. 02
 The old version will be saved and can eventually
 be restored.

 Paper calibration data will be preserved.
 Constrast settings will be preserved.
 Master calibration will be resetted.
 Saved jobs will be cancelled.
 Images are not touched.

************************************************
Continue( y[es],n[o] ):
y

y

(Actual Directory: /mnt/cdrecorder)

     2) Install Interface Device Driver
     3) Install/Update Durst Printer Software
     5) Take over DurstPrinter.setup from old software
     6) Exit Installation Program

Please select option:

6

Restart the computer to activate new software
Do you want to restart now   (y[es] , n[o])

Y
```

5. Network configuration

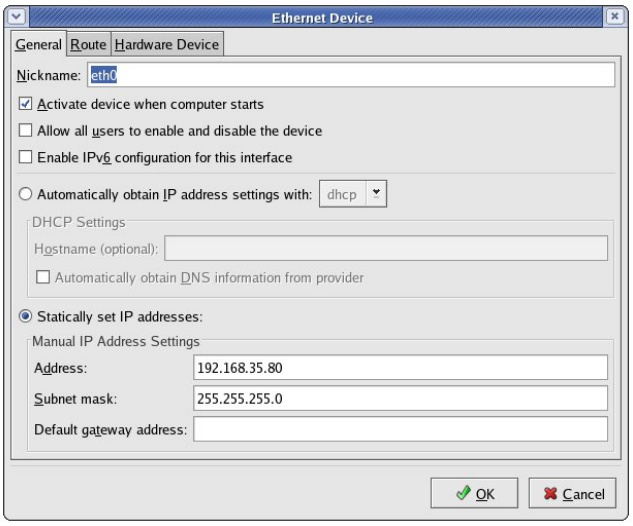


Picture 13

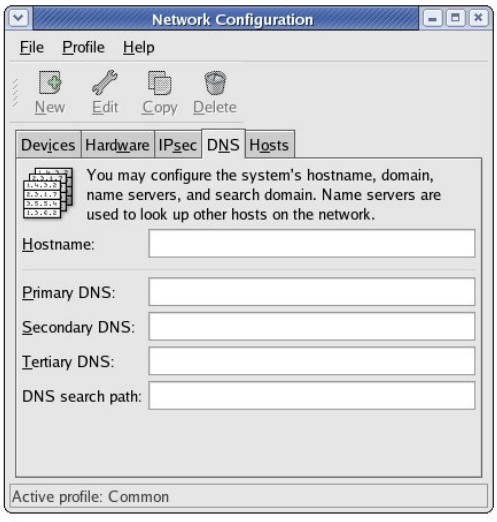

Network Configuration
File Profile Help
New Edit Copy Delete Activate Deactivate
Devices Hardware IPsec DNS Hosts
You may configure network devices associated with physical hardware here. Multiple logical devices can be associated with a single piece of hardware.
Profile Status Device Nickname Type
Active eth0 eth0 Ethernet
Active Profile: Common

Picture 14

1. activate the "Profile"
2. make a double click wit the mouse to open the Picture 15



Picture 15


Network Configuration
File Profile Help
New Edit Copy Delete
Devices Hardware IPsec DNS Hosts
You may configure the system's hostname, domain, name servers, and search domain. Name servers are used to look up other hosts on the network.
Hostname:
Primary DNS:
Secondary DNS:
Tertiary DNS:
DNS search path:
Active profile: Common

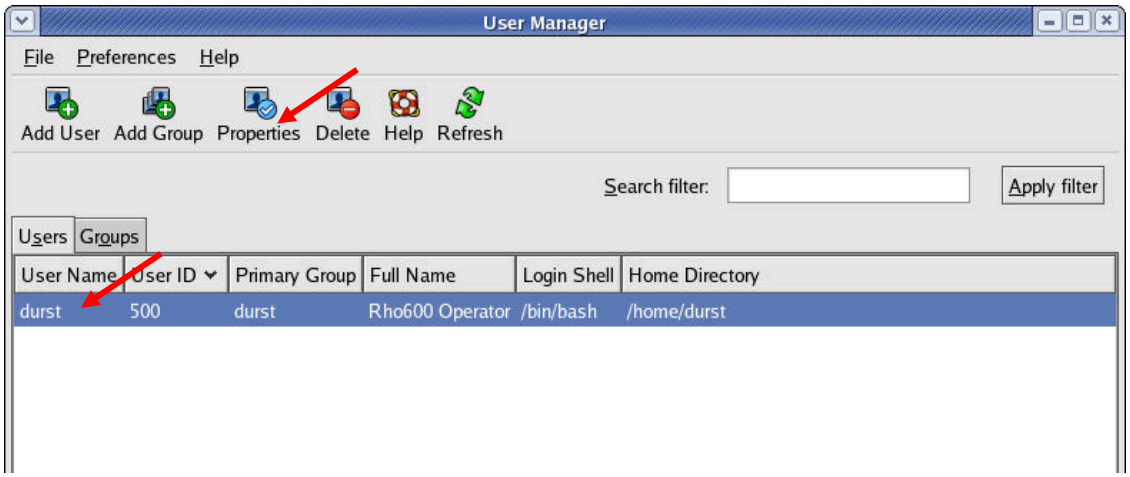
Picture 16

IP-Address and Subnet mask are setup from factory to communicate with Caldera Grand RIP!

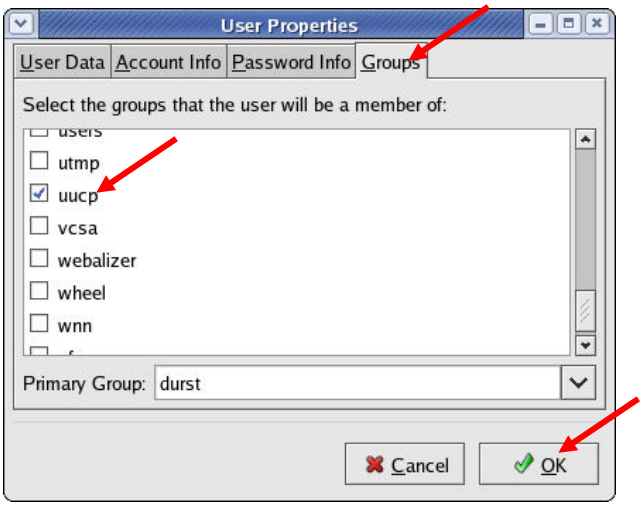
6. User group setting

→Applications → System Settings → User& Group

→ Select User "durst" and click on Properties



→ click on "Groups" and select uucp, then press "OK"



→ Close all Windows

Check Security Level:

→Applications → System Settings → Security Level

Firewall has to be disabled and all boxes have to be unchecked!

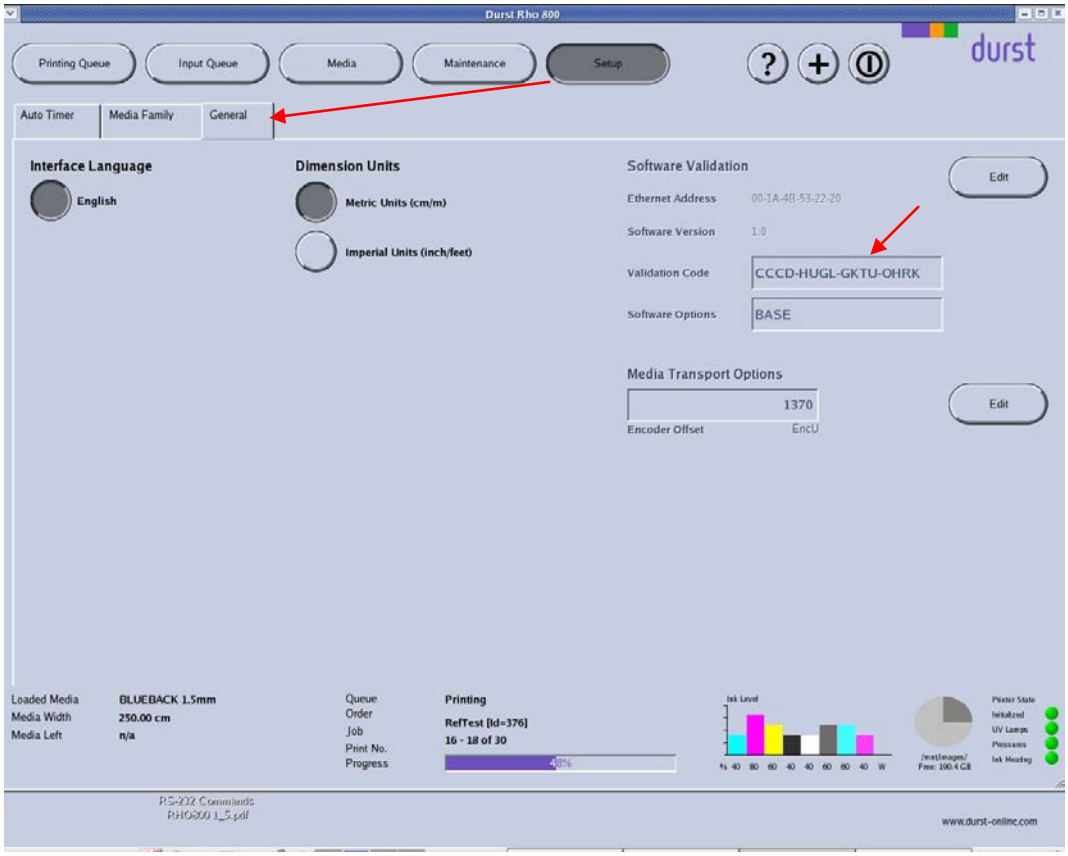
7. NFS installation (Prepstation only)

Copy the file "system-config-nfs-1.2.8.tar" from the DurstSW-CD into the folder /usr/src/redhat/sources.
Open a terminal:
"cd /usr/src/redhat/SOURCES"
"tar –xf system-config-nfs-1.2.8.tar"
"cd system-config-nfs-1.2.8"
"make"
"make install"
"system-config-nfs"
Close the Window "NFS Server Configuration"

8.Other configurations

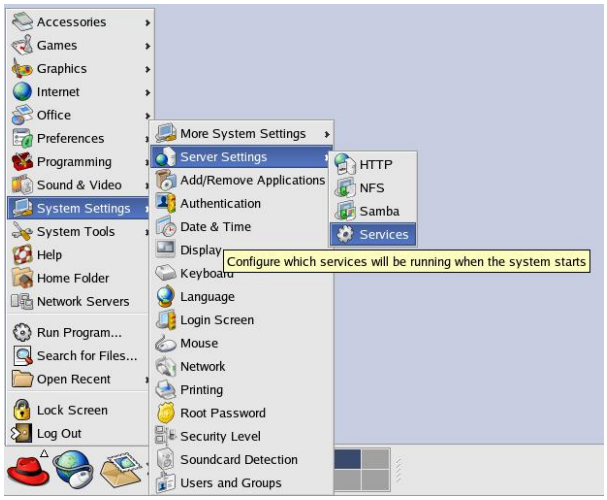
DurstPrinterSW Licence:

- Log Out
- Log In
- start the Rho SW
- takes in the Licence and Software options at SETUP →General
  With correct Licence code the "Printing Queue" and "Input Queue" gets activated.

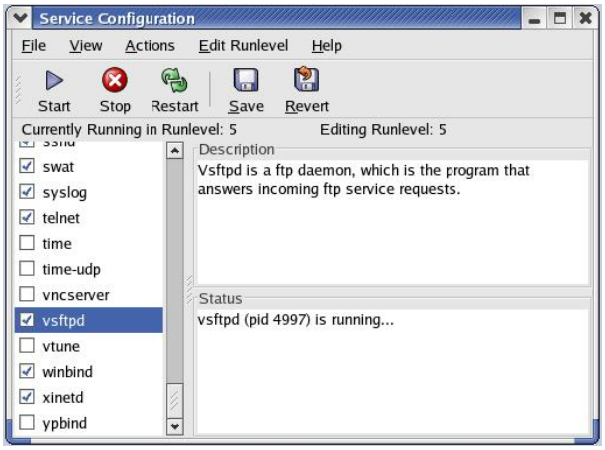


Install program "vsftp":

On the Durst SW-CD (Utilities) there is also the vsftp-program. Install the program with a double click with the mouse and activate it as shown in picture 19+20.



Picture 19



Picture 20

9.Change of the image harddisk

Remove old HDD and install the new one, start the Workstation and Linux will start up in the Emergency Repair Console

⇨ enter as Root with Root-Password

⇨ Create partition:
fdisk /dev/sdb
n -> new partition
p -> primary
cylinder **1 - 13262**
w -> write to disk
ready

⇨ How to format the hard disc:
with command "**mke2fs /dev/sdb1**"

⇨ Change the ext3:
with command "**tune2fs -j /dev/sdb1**"

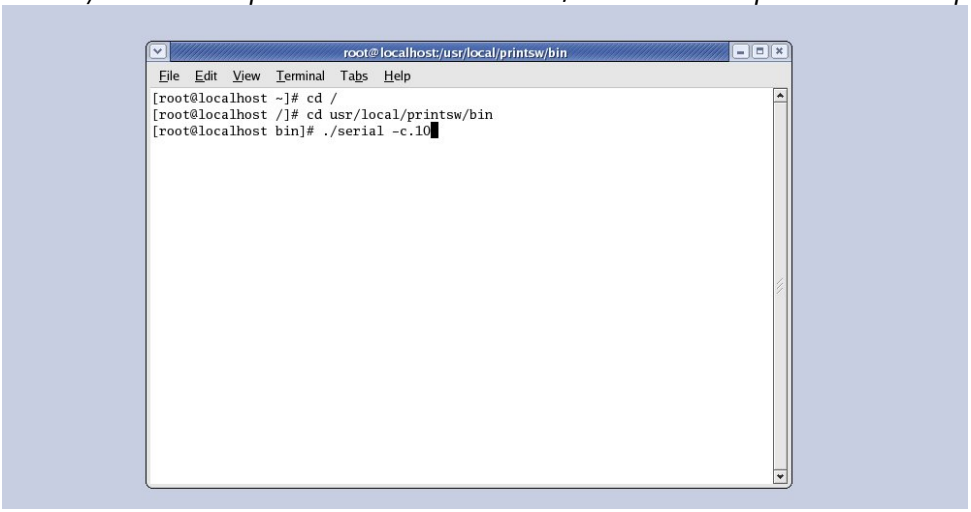
⇨ How to label the hard disc:
"**e2label /dev/sdb1 /mnt/images**"

⇨ Reboot the workstation
"**shutdown -r now**"

Info:

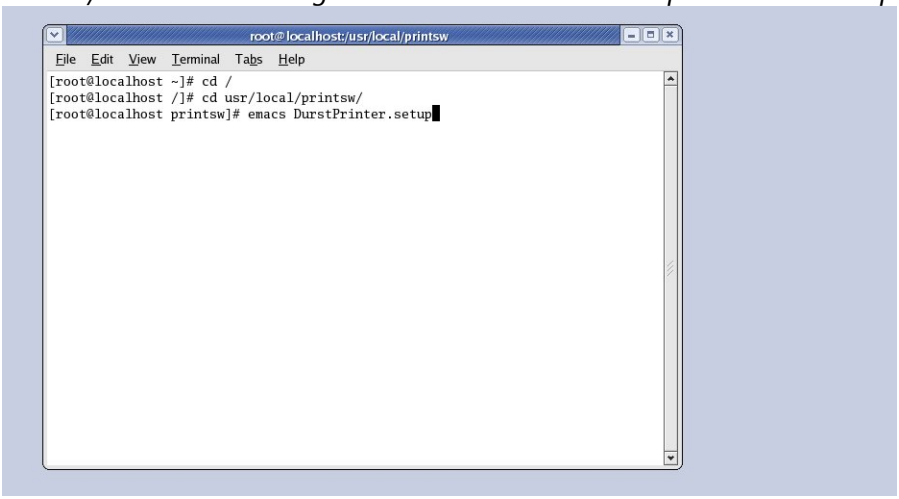
To open an „Editor Window" press the right button on your mouse (Desktop) and select "New Terminal".

When you want to put in a serial command, follow the steps as shown in picture 21



Picture 21

When you want to change to the "DurstPrinter.setup" follow the steps as shown in picture 22



Picture 22

End of installation!8. Change image HDD

10. Add new image harddisk

For SAS disks (XW8400 and Z800 workstations)

1.) Make preparations

Attention: Images on printer's hard disk (/mnt/images) will be deleted
Navigate to /etc/
Open the file 'fstab'
Find the entry:

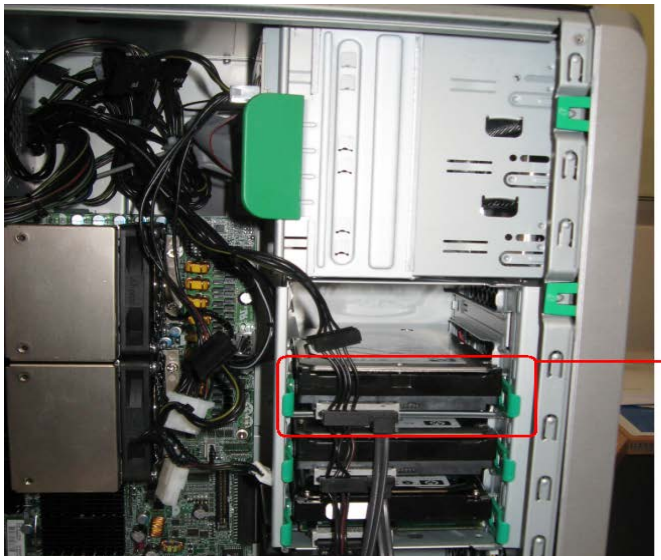
```
Label= /mnt/images /mnt/images    ext3    Defaults    1 2
```

Disable the entry by setting '#' in front:

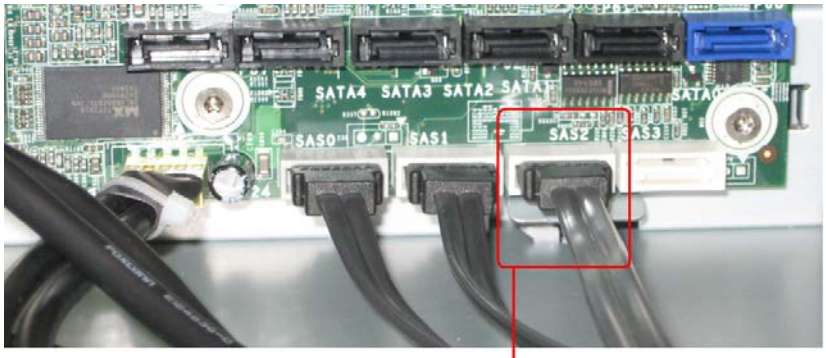
```
# Label= /mnt/images /mnt/images   ext3   Defaults    1 2
```

SAVE the file and shutdown the workstation

2.) Installation of additional disk



Connection of 3rd HD on motherboard:



Do the wiring on SAS2.
Otherwise the function is not given

3.)Create a Software Array

Start the Workstation

Open Terminal

►Important: Pay attention to the spaces in the line

Do the entry:

```
mdadm --create /dev/md0 --level=0 --raid-devices=2 /dev/sdb /dev/sdc
```

Now the new device is mounted

Partitioning

Open Terminal

Type:

```
fdisk /dev/md0
```

n	press Enter	new partition
p	press Enter	primary partition
1	press Enter	first partition
press Enter		
press Enter		
w	press Enter	execute partiton

Format the new disk

In Terminal:

`mke2fs –j /dev/md0`	Enter	
`e2label /dev/md0 /mnt/images`	Enter	give name

Now you have to compile a *.conf Dat.

In Terminal:

`cd /etc`	Enter
`echo 'DEVICE /dev/sdb /dev/sdc' > mdadm.conf`	Enter
`mdadm --detail --scan >> mdadm.conf`	Enter

Afterwards open again the fstab file in the /etc/ folder

- Remove the '#' you set in step 1
- Save the file
- Restart the workstation
- Open a Terminal and type (setting the permissions again – for security)
  `chmod –R 777 /mnt/images`

If you want to change the original Image HD too, just follow the same steps from above.

After all it is important to restart the workstation to check if the raid array will be load again automatically. If not check the entry in /etc/mdadm.conf (`DEVICE /dev/sdb /dev/sdc`).